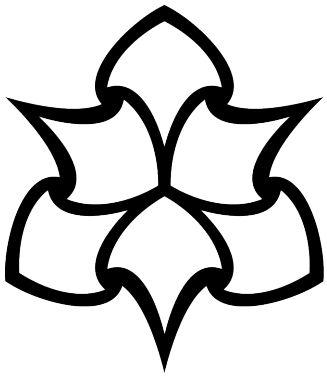

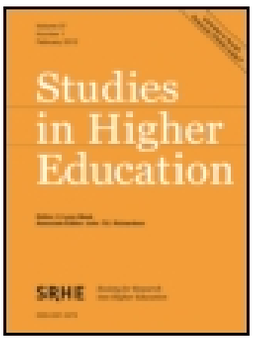

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Does entrepreneurship education in the first year of higher education develop entrepreneurial intentions? The role of learning and inspiration

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Drawing on entrepreneurship education (EE) theory, this article examines the role of learning and inspiration in developing students' entrepreneurial intentions in the First Year in Higher Education. This addresses the paucity of research on early university experiences of EE and their influence on entrepreneurial intentions. Using a longitudinal survey of business students at a British university, the authors identify four scenarios related to the participation/non-participation in EE and subsequent increase or decrease of entrepreneurial intentions. A sub-set of those surveyed are interviewed ($n = 49$) to better understand how their university experience has influenced their entrepreneurial intentions. Findings suggest that the influence of EE is variable, in some cases even leading to a decrease in entrepreneurial intentions. The results contribute to theories of EE and intentions in the early stages of higher education. The authors discuss implications for theory and practice.

Keywords: entrepreneurship education; learning; inspiration; entrepreneurial intentions; First Year in Higher Education

Introduction

Entrepreneurship education (EE) has expanded rapidly in higher education (HE) institutions around the world (Fretschner and Weber 2013). This expansion has been driven by entrepreneurship's promise as a vehicle for promoting economic renewal and growth (Greene and Saridakis 2008).

A major premise underpinning the expansion of EE is that entrepreneurship can be learnt (Fretschner and Weber 2013), can develop student entrepreneurial intentionality (Pittaway and Cope 2007) and ultimately facilitate business start-up (Nabi, Holden, and Walmsley 2010). However, there is little understanding of how EE increases intent, and indeed not all studies suggest it does (e.g. Oosterbeek, Van Praag, and Ijsselstein 2010).

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Limited research exists that examines the details of EE itself, and how it influences entrepreneurial intentions (Lorz, Mueller, and Volery 2013). Furthermore, most studies examining the impact of EE on entrepreneurial intentions focus on the latter stages of a university student's journey (Collins, Hannon, and Smith 2004; Liñán, Urbano, and Guerrero 2011). Students about to graduate might arguably be more concerned about the transition from education to work than those further from graduation (Lemmink, Schuijf, and Streukens 2003). This, however, leaves a gap regarding early HE experiences and their influence on entrepreneurial intentions, despite recent recognition that the transition into HE is complex (Brooman and Darwent 2014) and can be significant to the development of entrepreneurial intentions (EU 2012; Smith and Beasley 2011).

Consequently, this study focuses on the role of EE in developing students' entrepreneurial intentions in the First Year in Higher Education (henceforth FYHE). In particular, we focus on entrepreneurial learning and inspiration as key elements of EE (Souitaris, Zerbinati, and Al-Laham 2007).

We couch our research in the context of the purpose of HE. For some stakeholders, HE represents an instrumentalist mechanism for contributing to the increased efficiency and output of the economy, the development of students' technical skills and employability prospects (e.g. Leitch 2006). At the other extreme, HE is cast in more philosophical terms as primarily a developmental process (Biesta 2013; Dewey 1897), where the key stakeholder is the learner rather than the economy.[1] In practice, a blended conception of purpose has emerged over the last 20 years (Dearing 1997). Although UK government policy (and business schools) tends to take the former narrower, instrumentalist view (BIS 2015) aiming to enhance students' entrepreneurial capability and intent, this does not mean that they ignore wider conceptions of purpose. Thus, in our research, we consider the purpose of EE in the FYHE as both a 'development of the student' (an enlightenment purpose) and as useful for future entrepreneurial prospects (a neo-liberal purpose).

In addition to a longitudinal survey with a pre-post intervention research design – frequently absent in studies of the influence of EE on entrepreneurial intentions (Lorz, Mueller, and Volery 2013) – we also analyse qualitative interview data. The qualitative data seek to strengthen the quantitative analysis, providing fine-grained insights into the 'how' of the education-intentions link. In contributing to understanding the role of EE in the FYHE in developing entrepreneurial intentions, our research should consequently be of interest to educators, researchers and policy-makers.

Literature review

Theoretical positioning: entrepreneurship education and entrepreneurial intentions

The development of entrepreneurial intentions is increasingly being encouraged from the outset of HE through to graduation, with the aim of stimulating entrepreneurial behaviour (Smith and Beasley 2011). The early development of entrepreneurial intentions is particularly important because it can lead to later persistence in the intention to start up a business (DeGeorge and Fayolle 2008). As a period of transition, FYHE entrepreneurship programmes play an important role in the development of entrepreneurial intentions (Shapero and Sokol 1982).

Notwithstanding numerous studies on the formation of entrepreneurial intentions, which frequently draw on Ajzen's (1991) and Shapero and Sokol's (1982) work, research on EE is still at an exploratory stage of theoretical and conceptual development (Souitaris, Zerbinati, and Al-Laham 2007). Certainly, very little work has been undertaken on the development of student entrepreneurial intentions specifically in the FYHE.

Drawing on Souitaris, Zerbinati, and Al-Laham's (2007) framework, we focus on two main areas of EE: entrepreneurial learning (knowledge and skills) and entrepreneurial inspiration (changing hearts and minds towards entrepreneurship). The framework also incorporates entrepreneurial intentions, which refer to 'a conscious awareness and conviction by an individual that they intend to set up a new business venture and plan to do so … ' (Nabi, Holden, and Walmsley 2010, 538). This framework provides an overarching theoretical lens highlighting types of entrepreneurial learning and inspiration related to enhancing (or decreasing) entrepreneurial intentions in the FYHE.

Entrepreneurial learning and intentions in the FYHE

Recent research on the complexity of learning in HE highlights that there is little attention paid to the 'what, how and from whom' students acquire skills for their future employment (Jackson 2015). We argue that these criticisms apply equally to research on EE and the development of entrepreneurial intentions. We therefore draw on Johannisson's (1991) work on entrepreneurial learning, which Souitaris, Zerbinati, and Al-Laham (2007) later develop, and conceptualise as comprising: know-why (values and motivation of entrepreneurs), know-what (knowledge about what needs to be done), know-how (practical abilities and skills), know-who (awareness of social networks and ability to use them) and know-when (experience and intuition about when to take action). This classification emphasises a breadth of entrepreneurial knowledge and skills, and a depth of understanding about the business start-up process.

Johannisson's (1991) conceptualisation of learning encompasses 'inspiration' (why entrepreneurs act), a separate concept discussed later in the paper. However, as operationalised by Souitaris, Zerbinati, and Al-Laham (2007), knowing what motivates entrepreneurs is different from being motivated oneself. Hence, the former is still a part of entrepreneurial learning (as opposed to entrepreneurial inspiration).

Past research suggests that learning from EE programmes can improve the ability to identify opportunities and enhance entrepreneurial intentions (Souitaris, Zerbinati, and Al-Laham 2007). In this sense, recent empirical reviews (Lorz, Mueller, and Volery 2013) suggest a positive relationship between participating in an EE programme and developing entrepreneurial intentions. Yet, the evidence in this respect is equivocal. For example, Souitaris, Zerbinati, and Al-Laham (2007) found no significant relationship between EE programme learning and intentions. Other studies even suggest an inverse relationship between EE programmes and entrepreneurial intentions (Oosterbeek, Van Praag, and Ijsselstein 2010; Von Graevenitz, Harhoff, and Weber 2010). Explanations include a growing realisation of the limits to personal abilities and an increased awareness of the challenges inherent in starting a business (Oosterbeek, Van Praag, and Ijsselstein 2010). Although plausible, these explanations remain speculative. More empirically rooted research about the 'what' and the 'how' of EE programmes' relationship with entrepreneurial intentions is therefore needed (Lorz, Mueller, and Volery 2013; Pittaway and Cope 2007).

Furthermore, the limited empirical research that exists (Souitaris, Zerbinati, and Al-Laham 2007) does not explore the relationship between different types of entrepreneurial learning and entrepreneurial intentions. The broader literature on EE, however, offers insights into different types of entrepreneurial learning (Fayolle, Gailly, and Lassas-Clerc 2006; Johannisson 1991), suggesting a fundamental distinction between theoretical (e.g. 'know-what', 'know-why') and practical-based (e.g. 'know-how', 'know-who') learning. Whilst the former includes theoretical knowledge such as what motivates entrepreneurs and what needs to be done in the business start-up process, the latter encompasses a range of practical competences such as acquiring new skills and abilities related to opportunity identification, creativity, marketing, finance and accessing social networks (Johannisson 1991; Nabi, Holden, and Walmsley 2010). The lack of research that explores such types of learning and the relationship to entrepreneurial intentions in the FYHE provides a rationale for the qualitative approach adopted in our research.

Entrepreneurial inspiration and intentions in the FYHE

Inspiration entails motivation, becoming energised and directing behaviour towards a desired target. It also involves a trigger, such as a person, idea or event (Thrash and Elliot 2003), which may influence new thoughts and behaviours that help the individual achieve a desired target. Within the context of EE, entrepreneurial inspiration has been defined as 'a change of hearts (emotion) and minds (motivation) evoked by events or inputs from the programme and directed towards considering becoming an entrepreneur' (Souitaris, Zerbinati, and Al-Laham 2007, 573).

Although a limited number of studies investigate entrepreneurial intentions in the FYHE (Majumdar and Varadarajan 2013), Souitaris, Zerbinati, and Al-Laham's (2007) study is the only empirical study that focuses specifically on inspiration (albeit not in the FYHE). The study reports that it is entrepreneurial inspiration (rather than other EE programme benefits) which positively relates to the start-up intention. Souitaris, Zerbinati, and Al-Laham (2007, 587) conclude:

> … often there is something more than information, background, personality or cognition, which is whether the individual 'falls in love' with the entrepreneurial career and/or with an entrepreneurial opportunity driven by emotion and personal preference (love is blind) rather [than] rational evaluation.

Souitaris, Zerbinati, and Al-Laham (2007) only examine entrepreneurial inspiration from an EE programme in a general sense. In contrast, an EE programme can offer various triggers (Thrash and Elliot 2003). They could encompass a broad twofold classification of people (e.g. university lecturers, role models, mentors and entrepreneurs) and events (and the ideas that are stimulated by these events) from educational activities (e.g. business simulation exercises, business plan development and presentation of ideas) (cf. Souitaris, Zerbinati, and Al-Laham 2007; Thrash and Elliot 2003). The lack of research that explores such types of inspiration (as with learning) and the relationship to entrepreneurial intentions in the FYHE provides a rationale for the qualitative approach adopted in our research.

The direction of inspiration from entrepreneurship programmes is also worth exploring. Inspiration can be both positive and/or negative in terms of moving the individual towards or away from entrepreneurship. Early HE experiences could inspire

students towards an entrepreneurial career path (i.e. business start-up) or towards alternative career paths (e.g. organisational employment). Thus, it is important to look at our EE programme in the FYHE holistically to analyse how students have been inspired or deterred from entrepreneurial intentions.

Methodology

We collected data from FYHE students on two separate occasions. First (2012/2013), we employed a survey to collect data on entrepreneurial intentions from undergraduate business school students (on EE and non-EE programmes) at the beginning of their first year at a British university in the North West of England. One year later (2013/2014), we conducted a follow-up survey to track students' progression in relation to start-up intentions, followed by in-depth interviews with a sub-sample of these students.

For the EE programme, we utilised a 'good practice' programme in the UK (Souitaris, Zerbinati, and Al-Laham 2007), which includes formal input on entrepreneurship comprising several components: (1) a taught component that focuses on the entrepreneurial process, for example, the identification, recognition and creation of business opportunities; (2) a practical component that helps to develop the tools and skills that support the entrepreneurial journey; (3) a group-based component that allows students to select their best idea, turn it into a business plan and deliver a pitch to tutors; (4) a reflective component that incorporates an individual portfolio of their entrepreneurial activities and development and (5) a broader business management component that includes topics such as finance, international business and organisational behaviour. For the non-EE programmes, we interviewed students from a range of business programmes that did not contain a formal entrepreneurship element.

Sample and procedure

The sample at Time 1 ($t1$) (2012/2013) comprised 619 FY students from EE and non-EE programmes. The sample at Time 2 ($t2$) (2013/2014) comprised 150 of the same students at $t1$ (the smaller sample size at $t2$ was largely the result of organisational constraints in terms of the provision of access to students).[2] The $t2$ sample therefore reflected all students who had completed the survey on the two occasions. Overall, ages ranged from 18 to 25 years, with 45% male and 55% female.[3]

The segmentation of our sample led to a 2×2 matrix (see Table 1) according to the receipt/non-receipt of EE and the increase/decrease of entrepreneurial intentions. Those students who had scored highest in terms of intent change (absolute scores), both positive and negative, were chosen for interview ($n = 49$). This procedure led to a focus on 'ideal types', since 'extreme' cases are more likely to display characteristics of interest in their purest form (Benton and Craib 2001). In an attempt to uncover the processes

Table 1. Scenarios and entrepreneurial intention change.

	EE	Non-EE
Increased intention	Scenario 1 45 surveyed (15 interviewed)	Scenario 3 28 surveyed (12 interviewed)
Decreased intention	Scenario 2 31 surveyed (11 interviewed)	Scenario 4 26 surveyed (11 interviewed)
No change in intention	13 surveyed	7 surveyed

associated with entrepreneurial learning and inspiration, these ideal types provide a useful heuristic device.

Measures at time 1

In order to provide baseline measures at the start of the FYHE, the questionnaire comprised a measure of entrepreneurial intentions and several other background measures (e.g. gender, nationality, previous EE and work experience).

Entrepreneurial intentions

We used a 10-item 6-point Likert scale of entrepreneurial intentions, with 4 items used as distractors and 6 items comprising the actual scale. The measure is psychometrically sound, with demonstrated international validity and reliability (Thompson 2009). Questions started with 'Thinking about yourself, how true or untrue is that you:' followed with, for example: 'Intend to set up a company in the future' (Cronbach's alpha = .721).

Measures and interview at time 2

The quantitative data were collected through a questionnaire that focused on entrepreneurial intentions (same scale as in *t*1, Cronbach's alpha = .734), entrepreneurial learning (alpha = .810), inspiration (alpha = .849) and other biographical data. Entrepreneurial learning (9 items) and inspiration (5 items) were measured using 6-point Likert scales (Souitaris, Zerbinati, and Al-Laham 2007). An example of the former is: 'To what extent did your first year at university: increase your understanding of the actions someone has to take in order to start a business (i.e. what needs to be done?)'. A sample item for the latter is: 'In your first year at university, to what extent did any of the following particular events or inputs change drastically your "heart and mind" and make you seriously consider an entrepreneurial career?: The views of a tutor/ lecturer'.

For the qualitative data, semi-structured interviews allowed students to narrate their experience of their FYHE. Students (on both EE and non-EE programmes) told their personal stories and expressed what was meaningful and important to them in relation to factors that motivated or deterred them from pursuing an entrepreneurial career path. This approach enabled us to gain a rich insight of students' own stories highlighting a coherent sense of continuity, discontinuity and self-change (Savickas 2002). The interviews focused, in particular, on critical experiences in the students' FYHE.

For the participants who had received EE, the interviews focused on five key areas: (1) broad start-up plans; (2) positive incidents/situations during or because of their EE module that changed their 'heart and mind' to intend to become an entrepreneur; (3) positive experience from other modules influencing their entrepreneurial intentions; (4) negative incidents/situations from their EE module that changed their 'heart and mind' *not* to intend to become an entrepreneur and (5) negative experience from other modules influencing their entrepreneurial intentions. For the participants who had not received EE, the schedule covered areas 1, 3 and 5. To enable students to express their views freely, the interviewers sought to maintain as natural a conversational style as possible while ensuring that these key themes were addressed. Interviews lasted approximately 25–45 minutes.

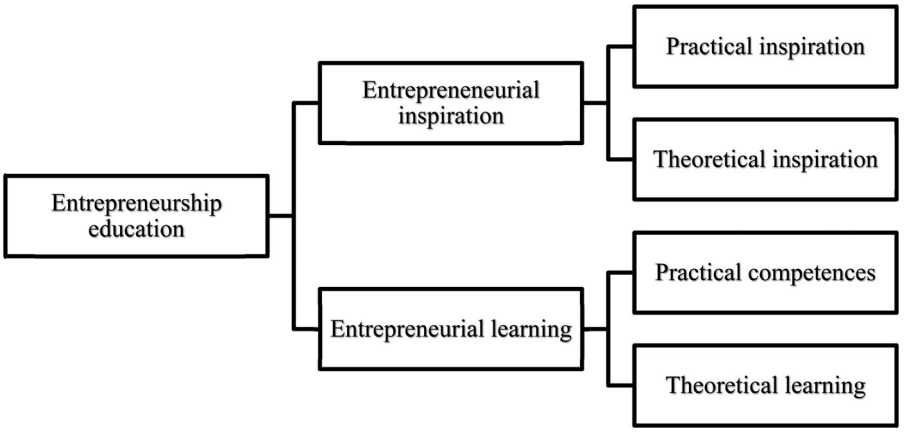

Figure 1. Coding hierarchy.

Data analysis strategy

t-Test statistics were used to investigate differences between respondents at *t*1 and *t*2 in each of the scenarios described above, with regard to learning, inspiration and entrepreneurial intention.[4] Qualitative data analysis software (NVivo) assisted the coding of interview transcripts. A preliminary pre-determined coding scheme was subsequently adapted based on the initial analysis of the transcripts (see Figure 1). An iterative process of independent coding and subsequent comparison and re-coding amongst three researchers led to consistency in applying the coding scheme. To ensure that we captured the overall narrative and understood the participants' overall story, we also provided a concise description of each case.

Results and discussion

Quantitative analysis

Table 2 presents the descriptive statistics. Entrepreneurial intentions remain similar from *t*1 to *t*2 (change in intention = −.018, not significant). Entrepreneurial intentions are significantly positively related to both learning and inspiration at *t*1 and *t*2.

Table 2. Means and correlations.

		Correlations				
Measure	Mean (SD)	1	2	3	4	5
1. Entrepreneurial intention time 1	3.540 (0.907)	–				
2. Entrepreneurial intention time 2	3.521 (0.931)	.620***	–			
3. Change entrepreneurial intention	−.018 (0.802)	−.412***	.460***	–		
4. Entrepreneurial learning	4.710 (0.861)	.234**	.372***	.164*	–	
5. Entrepreneurial inspiration	3.781 (1.354)	.217**	.272**	.068	.572**	–

Note: We also checked the relationships between the measures and background variables – age, gender, and work experience. No significant relationships are found, except for gender and time 2 intention. That is, males tend to increase their intention during the FHYE more than females do.

*Significant at $p < .05$.

** Significant at $p < .01$.

*** Significant at $p < .001$.

Table 3. Mean differences by participation in EE programme.

Measure	Mean (SD)		Mean Diff.
	EE	Non-EE	
1. Entrepreneurial intention time 1	3.626 (0.805)	3.453 (1.056)	0.173
2. Entrepreneurial intention time 2	3.683 (0.911)	3.398 (0.927)	0.285†
3. Change entrepreneurial intention	0.057 (0.806)	−0.056 (0.790)	0.112
4. Entrepreneurial learning	4.982 (0.826)	4.356 (0.806)	0.626***
5. Entrepreneurial inspiration	4.119 (1.113)	3.295 (1.544)	0.824***

† Significant at $p < .1$.
*** Significant at $p < .001$.

Table 3 compares students participating and not participating in the EE programme. Before the programme, we found no differences in their intention levels. At *t*2, entrepreneurial intentions are marginally higher for those taking the EE programme. Entrepreneurial learning and inspiration, in turn, are significantly higher for those participating in the EE programme.

When comparing the specific scenarios, we find a clearer explanation of the results (see Table 4). Scenario 1 is taken as the point of reference. Scenario 2 students initially have higher intention levels, but this decreases significantly during the FYHE. They report a similar level of inspiration, but significantly lower learning. In turn, Scenario 3 students have significantly lower intention levels at *t*1 and *t*2, and report significantly lower learning and inspiration.

Qualitative analysis

The qualitative analysis reveals a number of dimensions and underpinning sub-dimensions which we analyse in relation to the selected scenarios and our conceptual framework.[5] We also contrast scenarios from our sample, and explore the complex interplay of educational factors that influence entrepreneurial intentions in the FYHE.

Types of entrepreneurial learning in the FYHE

The first main dimension, types of entrepreneurial learning, incorporates two sub-dimensions: understanding the entrepreneurial process, and practical skills and

Table 4. Comparing scenario 1 with scenarios 2 and 3.

Measure	Scenario 1 (reference)	Scenario 2		Scenario 3	
		Mean	Mean diff.	Mean	Mean diff.
1. Entrepreneurial intention time 1	3.385	3.979	−0.593**	2.982	0.403*
2. Entrepreneurial intention time 2	4.019	3.210	0.809***	3.554	0.465*
3. Change entrepreneurial intention	0.633	−0.769	1.402***	0.571	0.062
4. Entrepreneurial learning	5.148	4.736	0.412*	4.278	0.870***
5. Entrepreneurial inspiration	4.227	3.942	0.285	2.938	1.289***

* Significant at $p < .05$.
** Significant at $p < .01$.
*** Significant at $p < .001$.

knowledge. These elements of entrepreneurial learning relate to the importance of theoretical knowledge and practical competences in the formation of entrepreneurial intentions. For both sets of EE students (intentions increase and decrease), there were similarities and differences in the role of EE in enhancing or reducing entrepreneurial intentions.

Understanding the entrepreneurial process. The development of theoretical insights about the business start-up process relates to an increase in confidence on the part of Scenario 1 EE students. It is recognised that this 'know-how' often features as a critical element of entrepreneurial learning, also being linked to the development of entrepreneurial intentions (Johannisson 1991; Souitaris, Zerbinati, and Al-Laham 2007).

By way of contrast, our Scenario 2 data also suggest that this learning can have the opposite effect: it can reduce entrepreneurial intentions where the start-up process presents a hurdle, either insurmountable or sufficiently challenging to turn intentions away from start-up. Nina,[6] for example, is asked to explain her decreased start-up intentions and with reference to her FYHE states 'I think it highlighted how hard it would be to become an entrepreneur. So, in a way it's just opened my eyes how difficult it would be […], so it kind of put me off'. She then explains how funding, working on one's own and coming up with a new idea all discourage her from setting up a business. In this sense, it is the overall process rather than a single factor that deters her. Similarly, Sue indicates that '… there is just loads of things to look through. That has definitely put me off becoming an entrepreneur because it is so much to look at and so many things to factor in'. This again is similar to Rad who in referring to risks and costs of start-up mentions 'Because it's a lot of time and money and hiring a lot of people, and starting up a business, taking loads of loans, and then going bankrupt …'. For Rad, the overall process is therefore a deterrent, especially when balanced against the risk of failure.

For other Scenario 2 students, learning about entrepreneurship does not lead to an abandonment of intention entirely, but to a greater reluctance to engage in entrepreneurship in the short-to-medium term; we might say that there is a shift from immediate to delayed entrepreneurship:

> … I don't think that I have got like the thought process. I don't think I have got it … Not initially [start-up a business] maybe in the future I can pick up more knowledge and stuff but not at the moment. (Abby)

A preference for stable employment becomes the preferred option. For example, Jan states that 'I'd rather have a stable career before, so that if I do start my own business and it doesn't work I've got something to fall back on'.

Past research (Oosterbeek, Van Praag, and Ijsselstein 2010; Von Graevenitz, Harhoff, and Weber 2010) suggests that an inverse relationship between EE and entrepreneurial intentions is possible and our qualitative data explain how this can occur. Crucially, the same education can lead to differential outcomes at the level of the individual, something that aggregate quantitative data do not necessarily reveal (cf. Souitaris, Zerbinati, and Al-Laham 2007).

Practical skills and knowledge. EE participants mention a wide range of skills and abilities including creativity, research, group work and finance. Not unexpectedly, Scenario 1 students explain how skills development increases intent. Several students raise their ability to be creative (i.e. think laterally). For example, Dan, an EE student whose

entrepreneurial intent increases, highlights '[EE] has definitely improved my creativity, I am much more confident with the idea I look into things a little bit differently now'. Similarly, but in more depth, Mark states how EE has improved skills in the creativity process: '[EE] enhanced my knowledge … The process of creating an idea, getting it through to this level, using the train of thought, you know it was like a method basically'. In terms of research skills, EE students note how being immersed in research on the practicalities and realities of start-up in the FYHE encourages them towards an entrepreneurial career path. They also mention that group working and financial skills raise their entrepreneurial intentions. Simon, whose intent increases, emphasises that 'it was quite good looking at the finance side of things … how much it would cost to have the product and business up and running'.

For Scenario 2, students provide examples of how entrepreneurial intention decreases because of the development of skills as part of their entrepreneurship programme. Students perceive a lack of realism in their learning experience as partly to blame for putting them off business start-up. Sometimes the required level of skills specifically relating to research and finance acts as a deterrent, for example:

> [Entrepreneurship education] was great to come up with new ideas and be creative but when you go into more details and you realise there's a lot of research that you have to do, the financials that you have to look at, I think it shows a bit more realistically. (Nina)

This is similar to Abby who claims:

> I just remember it was finance, I think you realise it is a lot more complicated … you need to bear in mind a lot of other things. So I suppose that makes you realise that it is a lot more difficult than you think.

In these instances, skills increase but not sufficiently to give the individual confidence to start a business. There is therefore a difference here between those students for whom a single factor such as finance appears to deter them compared with those students who are taken aback by the entire start-up process (as discussed previously).

Types of entrepreneurial inspiration in the FYHE

The second major dimension, entrepreneurial inspiration, also includes two sub-dimensions: theoretical inspiration and practical inspiration, both of which change the hearts or minds of students towards becoming an entrepreneur. The former is evoked by external sources such as peers, tutors, events, case studies or literature. In turn, practical inspiration is evoked by practical hands-on exercises, business simulation and so forth.

Theoretical inspiration. Scenario 1 students mention numerous sources of theoretical inspiration. Frequently, tutors provide examples from their own or others' experiences, which also includes pushing students to come up with ideas and asking thought-provoking questions:

> There was one [tutor] that kept asking 'why'. So, let's say you were lazy, [the tutor] asked, why are you lazy? Because I'm not doing what I should do. Why don't you do it then? And [the tutor] kept asking about what you've answered before. [The tutor] also asked how, what, where … So I started wondering about the price, when to do it, where do I need to do it and how do I do it. (Wang)

Inspiration from student peers plays an equally important role in inspiring participants:

> Just hearing other peoples' ideas … there was this one girl in my class she had her own little business that made me think that I should do something with my idea. It was not big business, but she was making quite a bit of profit … (Rehan)

These examples, and the following, demonstrate that theoretical inspiration could derive from both individuals and a novel business idea:

> … when we came up with business ideas in class and people saying about their ideas, and trying to put them into realistic terms, trying to imagine how these ideas might work out in real life and the real world … Some of the ideas that people came up with were things I wouldn't even imagine thinking of … (Saba)

Inspiration could also detract students from entrepreneurship. When probing deterring events or situations in their EE programme, Scenario 2 participants refer to people, especially tutors and specific events that relate particularly to financial risk. Several students fall into this scenario, such as Daisy who explains, 'My tutor said he had a business and how it failed … . Therefore, he said there is risk there … it was quite negative'. The same principle applies to the notion that hearing of other students' difficulties or business ideas being criticised also detracted from business start-up:

> Then someone was presenting and they thought it was really a good idea again somebody would speak and say this idea already exists and it's not a feasible idea. (Hana)

Practical inspiration. Practical inspiration could also inspire as well as detract from entrepreneurial intentions. Scenario 1 students' practical inspiration derives from group-based exercises (e.g. group presentations, or 'random ideas generation' exercises) which frequently, as this quote illustrates, lead to excitement about the prospect of starting up a business:

> I liked the group work … You are part of a group and you have got basically to come up with an idea, … you have got a market and you have to make an advert and stuff like that … the process really got me excited. (Mark)

There is also an element of growing confidence in some participants' narratives in relation to tackling practical tasks successfully as mentioned by Alex:

> I have always been a bit shy as I don't always have that much confidence with things. Now I am a lot more willing to stand up in front of people and present things. It has just proved to myself that I can actually stand up and do things off my own back. I can come up with new ideas now for different things to make myself successful in the future.

Regarding Scenario 2, practical EE exercises related to start-up costing and finance steer students away from entrepreneurship and inspire them towards 'safer' organisational employment, though this is often implicit. In response to exploring how entrepreneurial intentions have decreased, Bob, for example, emphasises that during a product-development exercise, he realises how expensive business start-up can be:

> The start-up costs were massive. … we looked at the factory costs and production costs and you would probably have to outsource it to a company. When we looked at all the

> costs, it was getting ridiculously high … in real life you are thinking the costs are going over £200,000. (Bob)

Overall pattern and comparison of scenarios

The qualitative data analysis demonstrates how EE can both foster but also decrease entrepreneurial intentions. From Scenario 1, the most important EE dimension in the FYHE that enhances entrepreneurial intentions is practical inspiration (11 cases/19 references). This is followed by learning practical entrepreneurial skills and knowledge (9 cases/24 references), then understanding the entrepreneurial process (9 cases/18 references), and finally, theoretical inspiration to start-up a business by others or academic material (7 cases/15 references). The pattern is largely consistent with the notion that EE learning and inspiration raise entrepreneurial intentions (Souitaris, Zerbinati, and Al-Laham 2007). Conversely, Scenario 2 demonstrates that the development of practical skills and knowledge, especially in the area of financial risk (17 cases/34 references), is the most important EE dimension that reduces entrepreneurial intentions. This is followed by the understanding of the complexity of the entrepreneurial process (9 cases/24 references), (lack of) practical inspiration from EE exercises (6 cases/17 references), and finally (lack of) theoretical inspiration in the form of negative tutor experiences or unsupportive tutors (5 cases/24 references). These experiences lead to a re-focusing towards organisational (rather than entrepreneurial) careers for this group of students.

Conclusions

This research sought to explore the relationship between EE and students' entrepreneurial intentions in the FYHE. To address this aim, we developed a framework around types of entrepreneurial learning and inspiration. A mixed-method, longitudinal study helped explore this framework and explain the 'what' and the 'how' of the relationship between EE and entrepreneurial intentions.

Our statistical analysis suggests that participating in the EE programme has important benefits. EE programme participants, on average, demonstrate higher entrepreneurial learning and inspiration, compared to their non-EE counterparts. Yet, the average change in entrepreneurial intentions from the beginning to the end of the year is not significantly different between EE and non-EE participants. This suggests mixed findings.

When we probe our data using qualitative analysis, we find an even more complex picture, with three main findings emerging. First, the role of EE in developing entrepreneurial intentions in the FYHE is mixed. EE can foster but also decrease entrepreneurial intentions. Where there is a strong increase in intentions, the findings point to an accumulation of a range of positive learning experiences, that is, theoretical understanding of the start-up process and development of practical entrepreneurial skills and knowledge, combined with a strong inspiration from theoretical (tutors, peers) and practical (hands-on) exercises. Where EE detracts from entrepreneurship, this is explained by the notion that, although students are developed as individuals (an enlightenment educational purpose as opposed to a neo-liberal one), entrepreneurial intent decreases because of the development of a more realistic and practical perspective on entrepreneurship. For such students, therefore, EE is primarily a developmental process, where they realise the complexity and challenges involved in business start-

up, as suggested by Oosterbeek, Van Praag, and Ijsselstein (2010). Even in this context, however, EE serves a valuable educational purpose; it leads to students becoming enlightened about entrepreneurship, and then re-focusing towards organisational careers, which seems like a less risky and less challenging option. EE, while often associated with neo-liberal agendas, can therefore still help students reach independent decisions about their careers.

Second, extending from EE theory (Johannisson 1991; Souitaris, Zerbinati, and Al-Laham 2007), our findings highlight the multi-dimensional nature of EE and the interplay of different dimensions of entrepreneurial learning and inspiration that influence entrepreneurial intentions. We identify that entrepreneurial learning incorporates theoretical (understanding steps in the start-up process) and practical (know-how) components. Similarly, we identify that entrepreneurial inspiration also comprises theoretical (triggered by external sources such as people or academic literature) and practical (typically triggered by group-based, practical hands-on exercises) components. The change in hearts and/or minds from these two types of inspiration can be very powerful, leading to higher entrepreneurial intentions. On the other hand, a single negative experience, for example, a tutor emphasising business failure, is enough to serve as a deterrent, at least for some students. This illustrates a strong emotional rather than purely rational basis to entrepreneurial intentions (cf. Souitaris, Zerbinati, and Al-Laham 2007).

A third key finding is that the relationship between EE and entrepreneurial intention is complex, and that entrepreneurial intention, at least over the FYHE, may fluctuate considerably. We acknowledge that other factors, such as age, nationality, family support, or student commitment to entrepreneurship, may play a role in determining entrepreneurial intentions that might equally benefit from further research (Fayolle, Gailly, and Lassas-Clerc 2006). Our research, however, focuses specifically on the relationship between EE and entrepreneurial intent in the FYHE. Most participants in our research (even those in Scenario 1 whose intent increases in the FYHE) report a simultaneous pull towards, and push away, from entrepreneurship. The most deterring FYHE experience relates to financial skills and analysis. Whilst this practical skill sometimes develops as part of a positive experience, it also often leads to considerable concern over the financial implications of starting a business.

Regarding the creation of better EE programmes, our research confirms existing literature on EE, albeit with reference to enhancing entrepreneurial intentions in the FYHE. First, our research highlights a focus on external hurdles related to the 'business plan' model (Honig 2004), such as financial planning and bank loans, which may adversely influence students' intentions. Thus, we suggest further research on alternative models such as those involving students re-evaluating their own resources and what is within their control (cf. effectuation theory, Sarasvathy 2001). Second, our research confirms that FYHE competence-based practical exercises (in our case, practical skills and knowledge from business simulation and hands-on activities) are important to developing entrepreneurial outcomes (Gilbert 2012). Given the lack of comparative studies with other pedagogical approaches in the FYHE, we recommend more research in this area. Finally, since our data suggest a degree of flux in intentions and that the relationship between EE and entrepreneurial intentions can be positive or negative in the FYHE, it is important to follow-up students in subsequent years in HE to understand the stability of intentions and influence of EE.

Extending from existing research, our findings also suggest a greater focus on novel approaches in EE programme design and future research. We offer three

main recommendations in this regard. First, our research clearly identifies the difficulty of designing an EE programme that (inexorably) increases entrepreneurial intentions. Our analysis suggests one of the reasons that not all students' intent increases is due to anxiety experienced by some when faced with practical hurdles and financial risk. The diversity of outcomes, given the diversity of a student cohort, is to be expected. In trying to address, indeed overcome, ingrown fears and concerns, a more creative approach to EE pedagogy is to include a more explicit engagement with the 'scariness' of the business start-up process, and an analysis of how scary it really needs to be. We urge further research in this area, and this relates to the emerging field of entrepreneurial emotion (feelings, affect and emotions) about becoming an entrepreneur (Cardon et al. 2012). This suggests the inclusion of a more emotional dimension to EE programme design that specifically explores students' emotional journey regarding for example, positive (happiness and excitement about a business idea) and negative emotions (stress, anxiety and frustration about securing equipment or financial support) (cf. Cardon et al. 2012). EE design could also incorporate emotional intelligence skills to allow students at an early stage to deal, for example, with understanding and regulating their own emotions to achieve their goals (Cardon et al. 2012).

Second, since we found potential business failure invokes fear, EE design could examine how students evaluate risk and 'explore the possibility of students not only seeing risk as a negative threat (i.e. fear of failure …), but also risk as a positive opportunity (i.e. missing a good opportunity …)' (Nabi and Liñán 2013, 649). *If* the aim of the EE programme is to adopt a more inclusive approach to develop all students, then our suggestions should work well to enable them to make better career development decisions (i.e. they are not suited to entrepreneurship) or even increase (rather than decrease) their entrepreneurial intentions because their fears are addressed.

Finally, *if* the specific aim of the EE programme in the FYHE is to inculcate entrepreneurial capability and intentions to enhance entrepreneurial career prospects (a neo-liberal educational purpose), our scenario-specific findings suggest that a targeted approach may be beneficial. In this case, it is better to gear EE towards enhancing entrepreneurial intentions in those who are attracted to it, and to screen for students' values as a pre-requisite for programme entry. In our research, the key element is not necessarily the design of the course, but the personal characteristics and experiences of the students. Some of them react negatively, whereas others will react positively to the same activity. We call for further research to understand in more detail why some students react differently from others. One possibility here is to consider the role of values to homogenise impact. Students with different value priorities may interpret the entrepreneurship teaching differently. For example, students stressing security and conformity will be afraid of the uncertainty inherent in entrepreneurship, whereas students stressing self-direction and stimulation will enjoy it and feel more inclined to entrepreneurship (Liñán, Moriano, and Jaén 2016).

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Notes

1. The distinction (enlightenment vs. neo-liberal) reflects two opposing philosophies of education. In the first, the purpose of education is to develop students as individuals, who then make their *own* decisions about their career, and in the second, the purpose of education is to create graduates to a politically determined model, to support politically defined (neo-liberal in this case) economic aims.
2. There were no significant differences between participants/non-participants in the follow up for gender, nationality, previous EE or work experience.
3. Detailed summary of respondent characteristics available from the authors on request.
4. In this paper, we focus on the comparison of Scenarios 1 and 2 (EE students whose intention increases vs decreases), and Scenarios 1 and 3 (EE vs non-EE students whose intention increases). Scenario 4 (non-EE-programme – intent decrease) students were not further examined in this study because comparing them with Scenario 1 did not make a meaningful contribution to our aim.
5. After qualitative analysis of Scenario 3 (non-EE, intent increase) students, we found very little that suggested any common themes or experiences. Furthermore, there were only a very few instances where Scenario 3 students mentioned learning or inspiration having increased their intentions. For these reasons, our discussion from this point only focuses on EE students whose intent increased or decreased (Scenarios 1 and 2). For both these scenarios, common themes and experiences emerged.
6. We replaced names of participants to anonymise identity.

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